wherein the at least one reservoir pocket of the upper layer is connected to the at least one reservoir pocket of the middle layer, and the at least one relief area of the middle layer is connected to the at least one relief area of the lower layer.

6. The stencil of claim 1 wherein said surface is selected from the group consisting of: a printed circuit board, a flexible circuit, and a wafer.

7. The stencil of claim 1 wherein said at least two layers are manufactured out of metal.

8. The stencil of claim 1 wherein said at least two layers are manufactured by one or more of the processes selected from the group consisting of: chemical etch, laser cut, and electroforming.

9. The stencil of claim 1 wherein said surface mount materials are selected from the group consisting of: adhesives, conducting adhesives, solder paste, and solder balls.

10. The stencil of claim 1 wherein said at least two layers are attached to one another by means of a dry-mount aqueous solder mask laminate.

11. The stencil of claim 10 wherein said at least two layers are aligned by means of at least one registration pin and at least one registration hole.

12. The stencil of claim 1 wherein said stencil comprises two layers:

an upper layer with at least one reservoir pocket; and

a lower contacting layer with at least one delivery aperture, wherein said at least one delivery aperture delivers surface mount materials from said at least one reservoir pocket to said surface.

Sub B1

1. A stencil for applying surface mount materials, comprising:

at least two layers, said at least two layers comprising:

at least one reservoir pocket; and

at least one delivery aperture, wherein said at least one delivery aperture delivers surface mount materials from said at least one reservoir pocket to a surface.

2. The stencil of claim 1 wherein said at least two layers further comprise:

at least one relief area, wherein said at least one relief area provides clearance for preexisting components on said surface so as to allow said at least one delivery aperture to contact said surface.

B

3. The stencil of claim 2 wherein said stencil comprises two layers,

an upper layer having at least one reservoir pocket; and

a lower layer having at least one delivery aperture and at least one relief area.

4. The stencil of claim 2 wherein said stencil comprises two layers:

an upper layer having at least one reservoir pocket and at least one relief area; and

a lower layer having at least one delivery aperture and at least one relief area, wherein the at least one relief area of the upper layer is connected to the at least one relief area of the lower layer.

5. The stencil of claim 2 wherein said stencil comprises three layers:

an upper layer having at least one reservoir pocket;

a middle layer having at least one relief area and at least one reservoir pocket; and

a lower layer having at least one delivery aperture and at least one relief area,

13. The stencil of claim 1 wherein said at least one reservoir pocket comprises:

a step-down pocket, wherein said step-down pocket is adapted to receive surface mount material applied directly into said step-down pocket and is further adapted to receive a device for forcing said surface mount material through said at least one delivery aperture.

14. A stencil for applying surface mount materials, comprising:

an upper reservoir layer with at least one reservoir pocket;

a middle separation layer with at least one relief area, wherein said at least one relief area provides clearance for preexisting components mounted on a surface, and wherein said middle separation layer further comprises at least one reservoir through pocket connected to said at least one reservoir pocket in said upper layer; and

a lower contacting layer with at least one delivery aperture, wherein said at least one delivery aperture delivers measured surface mount materials from said at least one reservoir pocket by means of said at least one reservoir through pocket to said surface, and wherein said lower contacting layer further comprises at least one relief opening which is connected to said at least one relief area in said middle separation layer.

15. The stencil of claim 14 wherein said surface is selected from the group consisting of: a printed circuit board, a flexible circuit, and a wafer.

16. The stencil of claim 14 wherein said upper layer, middle layer and lower layer are manufactured out of metal.

17. The stencil of claim 14 wherein said upper layer, middle layer, and lower layer are manufactured by one or more of the processes selected from the group consisting of: chemical etch, laser cut, and electroforming

18. The stencil of claim 14 wherein said surface mount materials are selected from the group consisting of: adhesives, conducting adhesives, solder paste, and solder balls.

19. The stencil of claim 14 wherein said upper layer, middle layer, and lower layer are attached to one another by means of a dry-mount aqueous solder mask laminate.

20. The stencil of claim 14 wherein said upper layer, middle layer, and lower layer are aligned by means of at least one registration pin and at least one registration hole.

21. A stencil for applying solder balls in a desired pattern onto a substrate, comprising:

an upper layer with at least one ball drop reservoir aperture; and

a lower contacting layer with at least one relief delivery aperture, wherein said relief delivery aperture draws solder material from said at least one ball drop reservoir aperture and provides clearance for flux on pad sites on said substrate.

22. The stencil of claim 21 wherein said upper layer and lower layer are manufactured out of metal.

23. The stencil of claim 21 wherein said upper layer and lower layer are manufactured by one of the processes selected from the group consisting of: chemical etch, laser cut, and electroforming

24. The stencil of claim 21 wherein said upper layer and lower layer are attached to one another by means of a dry-mount aqueous solder mask laminate.

25. The stencil of claim 21 wherein said upper layer and lower layer are aligned by means of at least one registration pin and at least one registration hole.

26. A method for depositing surface mount materials onto a surface, comprising the steps of:

matching relief areas in a stencil with preexisting surface mount components on a surface;

affixing the stencil to the surface;

applying surface mount materials to said stencil such that said surface mount materials fill reservoir pockets in said stencil; and

depositing surface mount materials onto said surface through delivery apertures on said stencil, said delivery apertures drawing said surface mount material from said reservoir pockets.

27. The method of claim 26 wherein said surface mount materials are selected from the group consisting of: adhesives, conducting adhesives, solder paste, and solder balls.

28. The method of claim 26 wherein said surface is selected from the group consisting of: a printed circuit board, a flexible circuit, and a wafer.